

REMARKS

Favorable reconsideration and allowance of this application are requested.

**1. Discussion of Amendments**

By way of the amendment instructions above, the independent claims pending herein have been further revised so as to clarify that component "ab2)" is a mandatory (i.e., not optional) component. Furthermore, claims 38, 41 and 52 have been revised so as to delete therefrom "phosphoric acid" as a possible species for the species of component "ab2)".

Therefore, following entry of this amendment, claims 38-39, 41-46 and 48-53 will remain pending in the application, of which claims 38, 41, 45, 48, and 52 are in independent format. Favorable reconsideration and allowance of such claims are therefore solicited.

**2. Response to 35 USC §103(a) Issues**

The only issue remaining to be resolved in this application is the rejection of claims 38-39, 41-46 and 48-53 under 35 USC §103(a) as allegedly obvious, and hence unpatentable, over Tada et al (USP 6,514,357). As will become evident from the following discussion, all pending claims herein are patentably distinguishable over Tada et al.

As has been noted in prosecution to date, the presently claimed invention relates to specific passivating layers as well as to compositions for treating metal surfaces that are suitable for forming such passivating layers. In this regard, one object of the presently claimed invention is to provide a passivating layer which is suitable both for work pieces which are subsequently coated and for those which are employed without a coating. In the case of subsequent coating of the work pieces provided with the

passivating layer care should be taken that adequate adhesion to the subsequent coating film is insured (page 3, lines 1 to 6 of the originally filed specification).

The object noted above is achieved according to the presently claimed invention by a passivating layer which is obtained by contacting the metal surface with a specific composition comprising a copolymer comprising (meth)acrylic acid or salts thereof (component aa), a carboxylate-containing monomer of formula I (component ab1) and — as a further mandatory component — monomers containing groups containing phosphonic acid or salts thereof (component ab2).

As can be seen in the examples of the present application, the specific compositions comprising a copolymer comprising monomers containing groups containing phosphonic acid or salts thereof (component ab2) show a very high stability in the salt spray test (page 34, table 2).

In Tada et al very specific compositions are disclosed comprising metal ions of Al, Mg and Mn, a water-soluble organic resin, an acid and water (column 3, lines 36 to 38). According to column 3, lines 23 to 29 it is an object of Tada et al to provide surface-treated metal material having superior corrosion resistance and conductivity, which does not require special effluent treatments when the material is worked and during the step of coating using the surface-treating agent.

According to Tada et al the compositions comprise a water-soluble organic resin containing at least one selected from the group consisting of polymers of carboxylic monomers, and copolymers of carboxylic monomers and other polymerizable monomers (column 4, lines 34 to 38). The other polymerizable monomers may be for example vinyl compounds containing a **phosphate group** (column 4, line 57). However, Tada et al neither specify such compounds nor do Tada et al comprise any example, wherein such a compound is used.

The copolymer according to the amended set of claims differs from the copolymer according to Tada et al in the feature that it specifically requires monomers containing groups having *phosphonic acid* or salts thereof (component ab2). There is no disclosure in Tada et al concerning copolymers comprising monomers containing groups containing *phosphonic acid* or salts thereof.

However, as can be seen in the examples in the present application, good results in the salt spray test are achieved by employing compositions comprising a copolymer comprising monomers containing groups containing *phosphonic acid* or salts thereof. This aspect of the presently claimed invention could not be rendered "obvious" from Tada et al, since Tada et al do not mention or suggest copolymers comprising monomers containing groups containing phosphonic acid or salts thereof.

The subject-matter of the amended set of claims of the present invention is therefore not obvious over Tada et al.

Further, the technical focus of Tada et al is entirely different from that of the present invention. In this regard, it is relevant to Tada et al that the therein disclosed compositions comprise three types of metal ions, i.e. aluminum ions, magnesium ions and manganese ions (column 5, lines 17 to 20). It is further mentioned in Tada et al. that because of such metal ions present pseudo-crosslinking reactions over a wide range of pH will occur during formation of films, and the corrosion resistance drastically improves compared to the ease where the three types of metal ions are not used (column 5, lines 22 to 25).

It is therefore very clear from Tada et al. that the presence of the three types of metal ions (aluminum ions, magnesium ions and manganese ions) is essential in the compositions disclosed therein.

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However, it has been found according to the presently claimed invention, that the presence of such metal components (aluminum ions, magnesium ions and manganese ions) in metal surface treating compositions is not necessary to obtain passivating layers on metal surfaces which show a superior corrosion resistance.

This aspect of the present invention is therefore not obvious in view of Tada et al, since Tada et al emphasizes the relevance of the presence of aluminum ions, magnesium ions and manganese ions.

Withdrawal of the rejection advanced under 35 USC §103(a) based on Tada et al is therefore in order.

### **3. Fee Authorization**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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